

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTASXY1626

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

***** Welcome to STN International *****

NEWS 1 Web Page for STN Seminar Schedule - N. America
NEWS 2 NOV 21 CAS patent coverage to include exemplified prophetic
substances identified in English-, French-, German-,
and Japanese-language basic patents from 2004-present
NEWS 3 NOV 26 MARPAT enhanced with FSORT command
NEWS 4 NOV 26 MEDLINE year-end processing temporarily halts
availability of new fully-indexed citations
NEWS 5 NOV 26 CHEMSAFE now available on STN Easy
NEWS 6 NOV 26 Two new SET commands increase convenience of STN
searching
NEWS 7 DEC 01 ChemPort single article sales feature unavailable
NEWS 8 DEC 12 GBFULL now offers single source for full-text
coverage of complete UK patent families
NEWS 9 DEC 17 Fifty-one pharmaceutical ingredients added to PS
NEWS 10 JAN 06 The retention policy for unread STNmail messages
will change in 2009 for STN-Columbus and STN-Tokyo
NEWS 11 JAN 07 WPIDS, WPINDEX, and WPIX enhanced Japanese Patent
Classification Data

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

***** STN Columbus *****

FILE 'HOME' ENTERED AT 10:41:14 ON 18 JAN 2009

=> file reg
COST IN U.S. DOLLARS SINCE FILE TOTAL

	ENTRY	SESSION
FULL ESTIMATED COST	0.22	0.22

FILE 'REGISTRY' ENTERED AT 10:41:41 ON 18 JAN 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 16 JAN 2009 HIGHEST RN 1094159-77-9
DICTIONARY FILE UPDATES: 16 JAN 2009 HIGHEST RN 1094159-77-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10563125.str



chain nodes :
6 7 9 10
ring nodes :
1 2 3 4 5
chain bonds :
1-6 1-7 7-9 9-10
ring bonds :
1-2 1-5 2-3 3-4 4-5
exact/norm bonds :
1-2 1-5 1-6 1-7 7-9 9-10
exact bonds :
2-3 3-4 4-5
isolated ring systems :
containing 1 :

G1:CH3,Et

Match level :

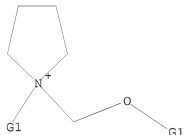
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 9:CLASS 10:CLASS

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 Me,Et

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 10:43:35 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 10 TO ITERATE

100.0% PROCESSED 10 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 11 TO 389

PROJECTED ANSWERS: 2 TO 124

L2 2 SEA \$\$\$ SAM L1

=> s l1 full

FULL SEARCH INITIATED 10:43:40 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 210 TO ITERATE

100.0% PROCESSED 210 ITERATIONS

49 ANSWERS

SEARCH TIME: 00.00.01

L3 49 SEA \$\$\$ FUL L1

=> file hcaplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

186.84

187.06

FILE 'HCAPLUS' ENTERED AT 10:43:46 ON 18 JAN 2009

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 18 Jan 2009 VOL 150 ISS 4

FILE LAST UPDATED: 16 Jan 2009 (20090116/ED)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 16 L3

=> d ed abs ibib hitstr tot

14 ANSWER 3 OF 16 ICAPLUS COPYRIGHT 2009 ACS on STN
 AD Entered STN: 28 Mar 2009
 AB The method produces high-purity quaternary ammonium salt by adding oxide or hydroxide of Group 1, 2-13 metal into quaternary ammonium salt containing protonic acid salt of tertiary amine impurity for neutralizing the protonic acid salt of a tertiary amine to produce tertiary amine, water, and metal salt; and removing the produced tertiary amine, water, and metal salt from the system.
 ACCESSION NUMBER: 2009:700256 ICAPLUS
 DOCUMENT NUMBER: 148143924
 TITLE: Method for producing high-purity quaternary ammonium salt
 INVENTOR(S): Nishida, Tetsuo; Nizano, Kazutoshi Oka, Akimori; Nishio, Yoshiro; Nishimura, Akahiro
 PATENT ASSIGNEE(S): Otsuka Chemical Co., Ltd., Japan; Stella Chemifa Corporation
 SOURCE: PCT Int. Appl., 7pp.
 COVERS: P14342
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY AC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NO 2006017596	AL	20060221	NO 2007-046028	20070216
Wt. As, Ag, Al, Am, Ar, Au, Az, Ba, Be, Bi, Br, Bz, Ca, Cd, Ce, Co, Cr, Cu, Cs, Fe, Ga, Ge, Hf, Hg, In, Ir, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Ni, Pd, Pb, Pt, Rb, Rh, Ru, Se, Si, Sn, Sr, Ta, Te, Ti, Tl, U, V, W, Y, Zn, Zr, Zr, Zr				
Am, Ar, Be, Bi, Br, Bz, Ca, Cd, Ce, Co, Cr, Cu, Cs, Fe, Ga, Ge, Hf, Hg, In, Ir, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Ni, Pd, Pb, Pt, Rb, Rh, Ru, Se, Si, Sn, Sr, Ta, Te, Ti, Tl, U, V, W, Y, Zn, Zr, Zr				
As, Ag, Al, Am, Ar, Au, Az, Ba, Be, Bi, Br, Bz, Ca, Cd, Ce, Co, Cr, Cu, Cs, Fe, Ga, Ge, Hf, Hg, In, Ir, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Ni, Pd, Pb, Pt, Rb, Rh, Ru, Se, Si, Sn, Sr, Ta, Te, Ti, Tl, U, V, W, Y, Zn, Zr, Zr				

PRIORITY APPL. INFO.: JP 2004-222229 A 20060919
 IT 415164-11-3F
 R: PCT (Purification or recovery); PREP (Preparation)
 Method for producing high-purity quaternary ammonium salt
 IN 415164-11-3 ICAPLUS
 CH Pyridinium, 1-(methoxymethyl)-1-methyl-, tetrafluoroborate (1-) (1:1)
 ICA INDEX NAME:
 CN 1
 CHN 415164-10-8
 CHN CI 815 H 0

14 ANSWER 3 OF 16 ICAPLUS COPYRIGHT 2009 ACS on STN (Continued)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE IE

FORMAT

14 ANSWER 4 OF 16 ICAPLUS COPYRIGHT 2009 ACS on STN
 AD Entered STN: 01 Jan 2009
 AB To contribute to a deeper insight into the hazard potential of ionic ligands to humans and the environment, an acetylcholinesterase (AChE) inhibition screening assay was used to identify toxicophore substructures and interaction potentials mediating enzyme inhibition. The pos. charged nitrogen atom, a widely delocalized aromatic system, and the lipophilicity of the side chains connected to the cationic head groups can be identified as the key structural elements in binding to the enzymes active site. With respect to this, the dimethylammonium, the quinuclidine and the pyridinium head groups exhibit a very strong inhibitory potential to the enzyme with IC50 values around 10 μM. In contrast, the polar and non-aromatic morpholine and group 14 found to be only weakly inhibiting to the enzyme activity, with IC50 values > 100 μM. The introduction of polar hydroxy, ether or nitrile functions into the alkyl side chain is shown to be a potent structural alteration to shift the corresponding ionic ligand to a lower inhibitory potential. Supporting this fact, for a series of imidazolium cations, a QSAR correlation was set up by the linear regression of the log IC50 vs. the logarithm of the HPLC-derived lipophilicity parameter log P. Admim, a broad set of anion species (anarg., organic and complex borate anions), commonly used as ionic liquid counterions, was tested and the vast majority exhibited no effect on AChE. Only the fluoride and fluorosulfate containing anion species which readily undergo hydrolytic cleavage can be identified to act as AChE inhibitors.
 ACCESSION NUMBER: 2009:1406 ICAPLUS
 DOCUMENT NUMBER: 1481439141
 TITLE: Qualitative and quantitative structure activity relationships for the inhibitory effects of cationic head groups, functionalized side chains and anions of ionic liquids on acetylcholinesterase
 AUTHOR(S): Aeppli, Cregory; Boller, Stefan; Bensch, Andrea; Stock, Frank; Fitner, William-Jobert; Weir-Siemann, Gray; Zentgraf, Bernd; Bacher, Johannes
 CORPORATE SOURCE: UFT - Centre for Environmental Research and Technology, University of Bremen, Bremen, D-28359, Germany
 SOURCE: Green Chemistry (2009), 10(1), 47-59
 COVERS: 040007; 040010; 1413-0262
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 151261-00-2
 R: B01 (Biological study, unclassified); B10L (Biological study) (qual. and quant. structure activity relationships for inhibitory effects of cationic head groups, functionalized side chains and anions of ionic ligand, on acetylcholinesterase)
 IN 151261-00-2 ICAPLUS
 CH Pyridinium, 1-(methoxymethyl)-1-methyl-, chloride (1:1) ICA INDEX NAME:

14 ANSWER 4 OF 16 ICAPLUS COPYRIGHT 2009 ACS on STN (Continued)



REFERENCE COUNT: 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE IE

FORMAT

L4 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 828358-89-2 HCAPLUS
CN Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, hexafluorophosphate (1-) (PCI) (CA INDEX NAME)



L4 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 902773-35-7 HCAPLUS
CN Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, (7-4)-trifluoromethylsulfonate (1-) borate (1-) (PCI) (CA INDEX NAME)



RN 902773-36-8 HCAPLUS
CN Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, (7-4)-chlorotrifluoroborate (1-) (PCI) (CA INDEX NAME)

L4 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 834861-90-4 HCAPLUS
CN Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, (7-4)-trifluoromethylsulfonate (1-) borate (1-) (PCI) (CA INDEX NAME)



RN 902462-35-5 HCAPLUS
CN Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, salt with imidodisulfuryl fluoride (1:1) (PCI) (CA INDEX NAME)



L4 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 902773-37-9 HCAPLUS
CN Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, (7-4)-tetrafluoroborate (1-) (PCI) (CA INDEX NAME)



14 ANSWER 6 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 902773-78-0 KCAPLUS
 CH Pyrolytic carbon, 1-(methoxymethyl)-1-methyl-, hexafluoroarsenate(1-)
 (CA INDEX NAME)

CN 1

CHN 615564-10-8
 CNF C1 R18 N 0



CN 2

CHN 16973-45-8
 CNF As F6
 OCl CCl8



RN 902773-79-1 KCAPLUS
 CH Pyrolytic carbon, 1-(methoxymethyl)-1-methyl-,
 (OC-6-11)-hexafluoroarsenate(1-)
 (CA INDEX NAME)

CN 1

CHN 615564-10-8
 CNF C1 R18 N 0

14 ANSWER 6 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



CN 2

CHN 17131-92-4
 CNF Fe Br
 OCl CCl8



RN 902773-42-6 KCAPLUS
 CH Pyrolytic carbon, 1-ethyl-1-(methoxymethyl)-, hexafluorophosphate(1-)
 (CA INDEX NAME)

CN 1

CHN 82058-92-7
 CNF C8 R18 N 0



CN 2

CHN 16919-18-9
 CNF Fe P
 OCl CCl8

14 ANSWER 6 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 902773-43-7 KCAPLUS
 CH Pyrolytic carbon, 1-ethyl-1-(methoxymethyl)-, hexafluoroarsenate(1-)
 (CA INDEX NAME)

CN 1

CHN 82058-92-7
 CNF C8 R18 N 0



CN 2

CHN 16973-45-8
 CNF As F6
 OCl CCl8



RN 902773-44-8 KCAPLUS
 CH Pyrolytic carbon, 1-ethyl-1-(methoxymethyl)-,
 (T-4)-tetrafluoroarsenate(1-)
 (CA INDEX NAME)

CN 1

CHN 82058-92-7
 CNF C8 R18 N 0

14 ANSWER 6 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



CN 2

CHN 36503-52-9
 CNF N Cl F3
 OCl CCl8



RN 902773-45-9 KCAPLUS
 CH Pyrolytic carbon, 1-(methoxymethyl)-1-methyl-, (T-4)-tetrafluoroarsenate(1-)
 (CA INDEX NAME)

CN 1

CHN 76420-44-2
 CNF C8 R18 N 0



CN 2

CHN 21340-02-3
 CNF Al F4
 OCl CCl8



RN 902773-46-0 KCAPLUS
 CH Pyrolytic carbon, 1-(methoxymethyl)-1-methyl-, hexafluorophosphate(1-)
 (CA INDEX NAME)

L4 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)

CH 1

CHE 764620-46-2
CIP CS 119 W 0

CH 2

CHE 16973-28-9
CIP FE F
CCI CCS

FE 902773-47-1 HCAPLUS

CH Pyridolindium, 1-(methoxymethyl)-1-methyl-, hexafluoroarsenate (1-) (CI) (CA INDEX NAME)

CH 1

CHE 764620-46-2
CIP CS 119 W 0

CH 2

CHE 16973-45-9

L4 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)

FE 902462-34-4 HCAPLUS

CH Pyridolindium, 1-ethyl-1-(methoxymethyl)-, chloride (1:1) (CA INDEX NAME)



● Cl-

FE 902462-36-6 HCAPLUS

CH Pyridolindium, 1-ethyl-1-(methoxymethyl)-, fluoride (1:1) (CA INDEX NAME)



● F-

FE 902462-37-7 HCAPLUS

CH Pyridolindium, 1-(ethoxymethyl)-1-methyl-, fluoride (1:1) (CA INDEX NAME)



● F-

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS

FOUNDT RECORD. ALL CITATIONS AVAILABLE IN THE RE

L4 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)

CHE Ax Fe

CCI CCS



IT 111263-00-2P 902462-35-2P 902462-34-4P

902462-36-6P 902462-37-7P

RL: DM (Industrial manufacture); RCT (Reactant); PEP (Preparation);

FACT

(Reactant or reagent)

(Preparation of quaternary ammonium salt for electrochem. device)

FE 111263-00-2 HCAPLUS

CH Pyridolindium, 1-(ethoxymethyl)-1-methyl-, chloride (1:1) (CA INDEX NAME)



● Cl-

FE 902462-33-3 HCAPLUS

CH Pyridolindium, 1-(methoxymethyl)-1-methyl-, chloride (1:1) (CA INDEX NAME)



● Cl-

L4 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN

FE Entered STN: 27 Jul 2008

AB Disclosed are a quaternary ammonium salt (I), an electrolyte solution and an electrochem. device (In the formula, R1 represents a straight chain or branched alkyl group having 1-4 C atoms, R2 represents a straight chain

or branched alkyl group having 1-3 C atoms, and X-1 represents H(CR)2-,

SO3-, NO3-, NCS- or NO2-). The electrolyte has high solubility in

organic solvents and elec. conductivity The electrolyte contains the quaternary

ammonium salt, and the electrolyte solution contains the electrolyte and organic

solvent from ethylene carbonate, propylene carbonate, di-n-butyl carbonate, Li

carboxylate, dimethoxy ethane and MeCN. The electrochem. device uses the

electrolyte.

ACCESSION NUMBER: 2006-733123 HCAPLUS

DOCUMENT NUMBER: 145176099

TITLE: Quaternary ammonium salt, electrolyte, electrolyte

solution and electrochemical device

INVENTOR(S): Nishida, Tetsuo; Hirano, Marutaka; Tomioka, Megumu;

Nishimura, Akihito; Arai, Yoshinori; Tohda, Hiroaki;

Oka, Akio

PATENT ASSIGNOR(S): Osaka Chemical Co., Ltd., Japan; Stella Chemif

Corporation

SOURCE: PCT Int. Appl., 50 pp.

CORDER: FINESD

DOCUMENT TYPE: Japanese

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

WO 2006077985 A1 20060717 WO 2006-3P00468 20060112

WI AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

FE AE, AG, AL, AM, AT, AU, BE, BG, BR, CA, CH, CN, CO, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IL, IN, JP, KR, MA, ME, NL, NO, NZ, PL, PT, RU, SE, SI, SK, TR, UA, US, UZ, VC, YU, YU, ZA, ZM, ZW

14 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)
 901767-93-3P, N-Ethyl-N-methoxymethylpyrrolidinium thiocyanate
 901767-94-0P, N-Ethoxymethyl-N-methylpyrrolidinium thiocyanate
 901770-06-7P
 E1: MF (Preparation, unclassified); PP (Properties); TON (Technical or
 engineered material use); TPO (Preparation); USE (Uses)
 [quaternary ammonium salt, electrolyte, electrolyte sole, and
 electrochem. device]
 RI 901767-93-6 HCAPLUS
 CI Pyrrrolidinum, 1-(methoxymethyl)-1-methyl-, salt with cyanocyanide (1:1)
 (PCI) (CA INDEX NAME)
 CN 3
 CRI 615564-10-8
 CMI CT R16 N O



CN 2
 CRI 17997-40-9
 CMI C2 R3



RI 901767-93-7 HCAPLUS
 CI Pyrrrolidinum, 1-(methoxymethyl)-1-methyl-, thiocyanate (PCI) (CA INDEX
 NAME)
 CN 1
 CRI 615564-10-8
 CMI CT R16 N O



14 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)
 CN 2
 CRI 392-04-5
 CMI C N S



RI 901767-94-0 HCAPLUS
 CI Pyrrrolidinum, 1-(methoxymethyl)-1-methyl-, salt with cyanocyanide (1:1)
 (PCI) (CA INDEX NAME)
 CN 3
 CRI 764620-44-2
 CMI C8 R18 N O



CN 2
 CRI 17997-40-9
 CMI C2 R3



RI 901770-04-7 HCAPLUS
 CI Pyrrrolidinum, 1-(methoxymethyl)-1-methyl-, salt with cyanate (1:1) (CA
 INDEX NAME)
 CN 1
 CRI 615564-10-8
 CMI CT R16 N O



CN 2

14 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)
 CN 2
 CRI 392-04-5
 CMI C N S



RI 901767-92-8 HCAPLUS
 CI Pyrrrolidinum, 1-(methoxymethyl)-1-methyl-, nitrate (1:1) (CA INDEX
 NAME)
 CN 1
 CRI 615564-10-8
 CMI CT R16 N O



CN 2
 CRI 14797-55-8
 CMI N O3



RI 901767-93-9 HCAPLUS
 CI Pyrrrolidinum, 1-ethyl-1-(methoxymethyl)-, thiocyanate (PCI) (CA INDEX
 NAME)
 CN 1
 CRI 920958-92-7
 CMI C8 R18 N O



14 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)
 CRI 661-20-1
 CMI C N O



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
 FORMAT

14 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)

AD New cyclic quaternary ammonium salts, compound of 8-alkoxyethylpyrrolidinium, neosolidinium, piperidinium, or morpholinium cations ($R = n\text{-Bu, MeOCH}_2\text{, MeOC(CH}_2\text{)}_2\text{ and a perfluoroalkyltrifluoroborate anion [PF}_6\text{]}^-$, BF_4^- , CF_3SO_2^- , $n\text{-C}_4\text{F}_9$, $n\text{-C}_6\text{F}_{13}$), were synthesized and characterized. Most of these salts are liq. at room temperature. The key properties of these salts, namely, phase transitions, thermal stability, d , viscosity, conductivity, and electrochem. windows, were measured and compared to those of their corresponding [BF₄]⁻ and [CF₃SO₂]⁻ salts. The structural effect on all the above properties was intensively studied in terms of the identity of the cation and anion, variation of the side chain in the cation (i.e., alkyl vs. alkyl ether), and change in the length of the perfluoroalkyl group (RF) in the [RFPF₃]⁻ ion. The reduction of Li⁺ ions and records of Li metal took place in pure

8-butyl-8-methylpyrrolidinium perfluorooctyltrifluoroborate as the supporting electrolyte. Some of these new salts show desirable properties, including low η , high thermal stabilities, low viscosities, high conductivities, and wide electrochem. windows, and may thus be potential candidates for use as electrolytes in high-energy storage devices. In addition, many salts are solid plastic crystals.

ACCESSION NUMBER: 2004127078 HCAPLUS
DOCUMENT NUMBER: 144468095
TITLE: Cyclic quaternary ammonium ionic liquids with perfluoroalkyltrifluoroborate synthesis, characterization, and properties
AUTHOR(S): Zhou, Zhi-Sun; Matsumoto, Hajime; Tatsuji, Kuniaki
CORPORATE SOURCE: Research Institute for Oblique Energy Devices, National Institute of Advanced Industrial Science and Technology, 1-8-11 Midorigaoka, Ikeda, Osaka, 563-8577, Japan
SOURCE: Chemistry—A European Journal (2004), 12(8), 2196-2212
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
JOURNAL: Journal
LANGUAGE: English
CROSS SOURCE(S): CASREACT 144468095
IT 411544-11-99 820918-79-09 834861-90-4P 886435-15-2P
RI: FEP (Preparation); SPN (Synthetic preparation); FEP (Preparation) (Preparation, d , viscosity and electrochem. properties of pyrrolidinium, neosolidinium, piperidinium or morpholinium quaternary ammonium ionic liqs.)
RI 411544-11-99 HCAPLUS
CI Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, tetrafluoroborate [3-] (1:1) (CA INDEX NAME)
CN 1

14 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RI 834861-90-4 HCAPLUS
CI Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, [7-(4-trifluoromethylfluoromethyl)borate [3-]] (1:1) (CA INDEX NAME)
CN 3
CIS 411544-10-8
CIP CT H16 N O



CN 2
CIS 390150-62-6
CIP CT 3 F 9
CCI CCS



RI 886435-15-2 HCAPLUS
CI Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, [7-(4-trifluoromethylfluoromethyl)borate [3-]] (1:1) (CA INDEX NAME)
CN 1
CIS 411544-10-8
CIP CT H16 N O



14 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)

CIS 411544-10-8
CIP CT H16 N O



CN 2
CIS 14074-70-5
CIP R F 4
CCI CCS



RI 820918-79-09 HCAPLUS
CI Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, salt with 1,1,1-trifluoro-3-[(trifluoromethyl)sulfonyl]methanesulfonamide (1:1) (CA INDEX NAME)
CN 1
CIS 411544-10-8
CIP CT H16 N O



CN 2
CIS 38837-38-0
CIP CT F6 H O 22

14 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STN (Continued)

CN 2
CIS 44629-17-6
CIP C 3 F 6
CCI CCS



IT 833446-37-0P
RI: RCT (Reaction); SPN (Synthetic preparation); FEP (Preparation); RACT (Reactant or reagent)
[Preparation, d , viscosity and thermal and electrochem. properties of pyrrolidinium, neosolidinium, piperidinium or morpholinium quaternary ammonium ionic liqs.]
RI 833446-37-0 HCAPLUS
CI Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, bromide (1:1) (CA INDEX NAME)



● R2

REFERENCE COUNT: 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RI FORMAT

14 ANSWER 10 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)
(electrolyte solns. contg. quaternary ammonium salts and org. solvents
for secondary lithium batteries and capacitors)

RE 820958-78-0 KCAPLUS

CH Pyrrolidinium, 1-(methoxymethyl)-3-methyl-, salt with

1,1,1-trifluoroeth-1-yl 4-chloromethylsulfonyl-methanesulfonate (1:1)

19C1 (CA INDEX NAME)

CH 1

CHN 615564-10-8

CHP C7 H16 N O



CH 2

CHN 905377-90-0

CHP C2 H6 N O4 S2



IT 820958-82-4 820958-82-5 820958-83-6

820958-84-7 820958-85-8 820958-86-9

820958-87-0 820958-88-1 820958-89-2

820958-90-5 820958-91-6 820958-92-8

820958-94-3 820958-95-1

SL TDR [Technical or engineered material use] USES [Uses]
solvents
[electrolyte solns. containing quaternary ammonium salts and organic

for secondary lithium batteries and capacitors]

RE 820958-83-4 KCAPLUS

CH Pyrrolidinium, 1-(methoxymethyl)-3-methyl-, carbonate (2:1) (CA INDEX

NAME)

CH 1

CHN 615564-10-8

CHP C7 H16 N O

14 ANSWER 10 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)

CH 1

CHN 615564-10-8

CHP C7 H16 N O



CH 2

CHN 14797-73-0

CHP C2 O4



RE 820958-84-7 KCAPLUS

CH Pyrrolidinium, 1-(methoxymethyl)-3-methyl-, fluoride (1:1) (CA INDEX

NAME)



● F-

RE 820958-85-8 KCAPLUS

CH Pyrrolidinium, 2-(methoxymethyl)-3-methyl-, methyl carboxonate (1:1) (CA

INDEX NAME)

CH 1

CHN 615564-10-8

CHP C7 H16 N O

14 ANSWER 10 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



CH 2

CHN 3812-32-6

CHP C O3



RE 820958-82-5 KCAPLUS

CH Pyrrolidinium, 1-(methoxymethyl)-3-methyl-, sulfate (2:1) (CA INDEX

NAME)

CH 1

CHN 615564-10-8

CHP C7 H16 N O



CH 2

CHN 14908-79-8

CHP O4 S



RE 820958-83-4 KCAPLUS

CH Pyrrolidinium, 1-(methoxymethyl)-3-methyl-, perchlorate (1:1) (CA INDEX

NAME)

14 ANSWER 10 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



CH 2

CHN 49745-25-7

CHP C2 H3 O3



RE 820958-86-9 KCAPLUS

CH Pyrrolidinium, 1-(methoxymethyl)-3-methyl-, acetate (1:1) (CA INDEX

NAME)

CH 1

CHN 615564-10-8

CHP C7 H16 N O



CH 2

CHN 71-56-1

CHP C2 H3 O2



RE 820958-87-0 KCAPLUS

CH Pyrrolidinium, 1-(methoxymethyl)-3-methyl-,

1,1,1-trifluoroethanesulfonate (1:1) (CA INDEX NAME)

CH 1

CHN 615564-10-8

CHP C7 H16 N O

14 ANSWER 10 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)

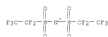


RN 82958-88-1 KCAPLUS
 CH Pyroliodinum, 2-(methoxymethyl)-1-methyl-, 2,2,2-trifluoroacetate (141)
 (CA INDEX NAME)



RN 82958-89-2 KCAPLUS

14 ANSWER 10 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 82958-91-6 KCAPLUS
 CH Pyroliodinum, 2-(methoxymethyl)-1-methyl-, tetrafluoroborate(1-) (141)
 (CA INDEX NAME)



RN 82958-92-8 KCAPLUS
 CH Pyroliodinum, 1-methyl-1-(methoxymethyl)-, salt with 1,1,1-trifluoro-N-(1-(1-(1-fluoroethyl)oxifonyl)methyl)ethanesulfonamide (111)
 (CA INDEX NAME)



14 ANSWER 10 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)
 CH Pyroliodinum, 1-(methoxymethyl)-1-methyl-, hexafluorophosphate(1-)
 (9C1)



RN 82958-90-5 KCAPLUS
 CH Pyroliodinum, 1-(methoxymethyl)-1-methyl-, salt with 1,1,1,2,2,2-hexafluoro-N-(1-(1-(1-fluoroethyl)oxifonyl)ethanesulfonamide (111)
 (CA INDEX NAME)



14 ANSWER 10 OF 16 KCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



RN 82958-94-9 KCAPLUS
 CH Pyroliodinum, 1-ethyl-1-(methoxymethyl)-, tetrafluoroborate(1-) (111)
 (CA INDEX NAME)



RN 82958-96-1 KCAPLUS
 CH Pyroliodinum, 1-(methoxymethyl)-1-ethyl-, tetrafluoroborate(1-) (111)
 (CA INDEX NAME)

14 ANSWER 11 OF 16 SCAPUS COPYRIGHT 2009 ACS ON STM (Continued)

CM 3

CHI 832958-95-0
 CDF C3 H30 N O



CM 2

CHI 14974-70-5
 CDF 3 74
 CCI CDS



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

14 ANSWER 11 OF 16 SCAPUS COPYRIGHT 2009 ACS ON STM
ED Entered STM: 22 Dec 2004
CI

AB A series of hydrophobic ionic liqs., e.g., 1, comprising N-alkyl-N-methylpyrrolidinium and perfluorooctyltrifluoroborate were prepared and characterized. The [C2F5BF3]-based salts showed lower η_{sp} than the corresponding [BFA]-based ones. Of these salts, some were liqs. at room temperature and show very low viscosities (37-71 cP at 25 °C), high ionic conductivities (3.0-6.8 mS/cm) and wide electrochem. windows.

ACCESSION NUMBER: 2004-111613 SCAPUS
 DOCUMENT NUMBER: 142117639
 TITLE: Low-melting, low-viscosity, hydrophobic ionic liquids
 AUTHOR(S): Shou, Shi-Rui; Matsumoto, Hajime; Tatemai, Fumiaki
 CORPORATE SOURCE: Research Institute for Sustainable Energy Science, National Institute of Advanced Industrial Science and Technology, Osaka, 563-8577, Japan
 SOURCE: Chemistry Letters (2004), 33(12), 1636-1637
 PUBLISHER: CSDH: CHLTAO; ISSN: 0368-7022
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 142117639
 IT 833446-37-0
 RI: RCT (Reactant); RACT (Reactant or reagent)
 [Preparation and physicochem. properties of pyrrolidinium perfluorooctyltrifluoroborates via anion exchange of pyrrolidinium bromide followed by salt formation with perfluorooctyltrifluoromethanesulfonate]
 CH 833446-37-0 SCAPUS
 CH Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, bromide (1:1) (CA INDEX NAME)

14 ANSWER 11 OF 16 SCAPUS COPYRIGHT 2009 ACS ON STM (Continued)

● Br⁻

IT 834861-30-4
 RI: PRE (Preparation); SPH (Synthetic preparation); PREP (Preparation)
 [Preparation, physicochem. properties, and electrochem. stability of pyrrolidinium perfluorooctyltrifluoroborates via anion exchange of pyrrolidinium bromide followed by salt formation with perfluorooctyltrifluoromethanesulfonate]
 CH 834861-30-4 SCAPUS

CM 334861-30-4 SCAPUS
 CHI 834861-30-4
 CDF C7 H16 N O
 CCI CDS

CM 1

CHI 615564-10-8
 CDF C7 H16 N O



CM 2

CHI 330750-62-6
 CDF C2 3 F5
 CCI CDS



IT 833446-41-4P
 RI: RCT (Reactant); SPH (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 [Preparation, physicochem. properties, and electrochem. stability of pyrrolidinium perfluorooctyltrifluoroborates via anion exchange of pyrrolidinium bromide followed by salt formation with perfluorooctyltrifluoromethanesulfonate]
 CH 833446-41-4P SCAPUS
 CH Pyrrolidinium, 1-(methoxymethyl)-1-methyl-, bromide (1:1) (CA INDEX NAME)

14 ANSWER 11 OF 16 SCAPUS COPYRIGHT 2009 ACS ON STM (Continued)
ED Entered STM: 22 Dec 2004
CI● Br⁻

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

[illegible]

```

ORIGIN SOURCE(8);          NAMEAT 379;344408
IT  61564-31-9
RL; IDL (device component use); USES (Uses)
      (electrolytic solution containing) elec. double layer capacitor with
high
      voltage retention and excellent reliability)
CH  61564-31-9  UCSPZ75
CN  Pyrazole, 2-(1-methoxymethyl)-1-methyl-, tetrafluoroborate [3-] [3:1]
    ICA IBDK NAME)
CM  3
CIN  61564-31-9
CMT  CT RLS N O

```

```

42 NUMBER 37 OF 38 HEADLINES COPYRIGHT 2009 ACS on STM
43 ENTERED 11/11/93 BY DES 1993
44 AN
45 ANtistatic properties of 1-( $\alpha$ -halomethyl)- and
46 1-( $\alpha$ -alkylthiomethyl)- $\beta$ -methyl pyrrolidinium chlorides,
47 and 1-( $\alpha$ -alkylthiomethyl)- $\beta$ -hydroxyethylmorpholinium chlorides,
48 1-( $\alpha$ -halomethyl)- and 1-( $\alpha$ -alkylthio)- $\beta$ -ethoxyethylmorpholinium chlorides,
49 and 1-( $\alpha$ -alkylthiomethyl)- $\beta$ -methoxyethylmorpholinium chlorides were
50 investigated. Of the 58 chlorides examined, 28 possessed excellent
51 anstatic properties:
52
53 ACCESSION NUMBER: 1993:65000
54 DOCUMENT NUMBER: 1993:65001
55 ORIGINAL REFERENCE NO: 1993:65004, 65006
56 TITLE:
57 ANtistatic properties of pyrrolidinium, morpholinium,
58 and pyridinium chlorides with  $\alpha$ -halomethyl and
59  $\alpha$ -alkylthiomethyl groups
60
61 AUTHOR(S):
62 Dermal, J.; Mowczany, P.; Pasternak, A.; Pruska, B.;
63 Tsch. Ind. v. Neaman, Pol.
64
65 CONFERENCE SOURCE:
66 Penzance, Surfactants, Surfactants (1993), 30(5),
67 328-330
68
69 DOCUMENT FIFE:
70 JOURNAL: TENSIDE
71 ISSN: 0932-2414
72
73 LANGUAGE:
74 German
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
```



● Cl^-

L4 ANSWER 12 OF 16 NCAPLUS COPYRIGHT 2009 ACS on STN (Continued)



23

CPH 14874-70-5
CNP 3 P4



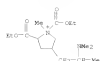
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

[illegible]

206-138^a. Oxidation of VIII with O₃ yielded H₂O₂ (dioxened derivative, n = 18^a) and MeCRO (dioxened derivative, n = 142^a). Catalytic reduction of 0.31 g VIII with 2.2 g Me-Cu absorbed 55 ml, n = 20 (manner of reaction, n = 218^a). Reduction of 0.31 g VIII with 2.2 g Me-Cu absorbed 55 ml, n = 142^a. Separation of VIII through the Cu salt yielded II, n = 223^a (decomposition), but crystalline X was not obtained.

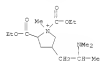
ACCESSION NUMBER: 1595:6114 KAPLUS
DOCUMENT NUMBER: 15:43:44
ORIGINAL REFERENCE NO.: 57-03109-1, VIIa
TITLE: ACTIVE COMPONENTS OF BACARA SIMPLEX AND RELATED

14 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STM (Continued)
 L4 Entered STM: 22 Apr 2001
 AB of. C.A. 53, 237b, 5238c. Hal (3.84 g.) and 19 g. CO(OEt)2 in 40 ml. Et2O
 treated dropwise with 15.7 g. MeOCOCCH2CH2Me (R = 1-piperidyl) in 16 ml. Et2O, refluxed 30 min., cooled, 8 ml. EtOH added, the solution poured into
 250 ml. ice H2O, neutralized with 18 ml. AcOH, the oily layer extracted with
 Et2O, washed with H2O, NaHCO3, and saturated NaCl, dehydrated with
 MgSO4, and
 the product distilled gave 7.4 g. fraction, Bp. 4-48-57, and 7.4 g.
 1-RCOOCCH2CH2CH2 (1), M.p. 55-57, 1 gives a diastereomer, C6H13O3N2R2,
 prism, n. 1497. RCOCOCCH2CH2 (146 g.) in 1 l. OEt4 at -75°
 treated dropwise with 360 g. H2CCL2, heated 2 hrs. at 80°, the precipitate
 filtered off, and the filtrate distilled gave 173 g. RCOCOCCH2CH2, m.p.
 78-80°, M. 140 (d) in Et2O ml. EtOH, 50 ml. m.p. 15-16, OEt4
 heated on an Et2O bath and the solvent removed in vacuo Mg(OEt)2, this in
 1200 ml. Et2O refluxed 15 min. with 210 g. RCOCOCCH2CH2, the Mg
 enolate
 solution treated dropwise with 240 g. MeOCOCCH2CH2Cl in 300 ml. Et2O,
 refluxed 30 min., cooled, 200 ml. EtO added, the Et2O layer washed with
 10% H2SO4, and the Et2O layer concentrated gave 490 g. residue; this in
 600 ml.
 CERE and 8.5 g. p-MeOC4H4CO2Et heated 2 hrs. at 80°, washed with
 saturated NaHCO3, and the product distilled gave 100 g.
 MeOCOCCH2CH2COOCCH2CH2
 (17), 10-10 85-90°, nD20 1.4631; Cs salt, C20H29O5N2, green
 granules, n. 1337. COCCH2CH2CH2 (45.5 g.) and 21.1 g. II at
 15-20° treated dropwise with 5.8 g. Et3N, kept 4 days at room
 temperature, the product stirred with 10% HCl and Et2O, the Et2O layer
 distilled to
 remove COCCH2CH2CH2 and II, b.p. 80-140°, to give 37 g. impure residue
 of RCOCOCCH2CH2C(CH2Me)2C(CH2Me)2CO2Et; this reduced with 20 g. Raney Ni
 and II at 80 kg./sq. cm. 6 hrs. at 20-30°, the product concentrated, Et2O
 added, stirred with 10% HCl, the aqueous layer treated with EtCO3, and
 extracted
 with Et2O gave 9 g. Et 2-ethoxycarbonyl-3-isopropyl-5-
 pyrrolidinemalonate (III), m.p. 138-40°, n. 64°; the
 Et2O layer yielded 8 g. III, M.p. 143-5°, n. 63°.
 Catalytically reducing 4.5 g. III in 50 ml. EtOH and 50 ml. AcOH with 200
 mg. PtO2 and 500 mg. H2-C 14 hrs. at room temperature and normal
 pressure of H2
 removing the solvent, stirring the residue with CERE and 10% HCl,
 treating
 the aqueous layer with EtCO3, and extracting the product with Et2O gave
 3 g.
 2,7,5-RCOC(Me)CH(R)COCCH2CH2C(CH2Me)2, m.p. 335°, prisms,
 needles, n. 1457. IV (1.6 g.) and 3.8 g. MeOC(CH2)2EtO in 6.2 ml.
 EtO refluxed 2.5 hrs., the Res. removed by addition of excess EtOAc, the
 EtOAc removed by passing through Amberlite 12-49, and the effluent
 concentrated
 gave 2.5 g. 2,7,5-RCOC(Me)CH(R)COCCH2CH2C(CH2Me)2, prisms, n. 225°
 (decomposition) (R2O).
 ACCESSION NUMBERS. 1959:45139 HCAPLUS



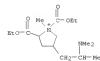
● I -

14 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STM (Continued)
 L4 Entered STM: 22 Apr 2001
 AB For diagnosis; see printed CA issue.
 AS The reaction of cyclopent-2-enylketone oxime (I) with H2 and AcOH yields
 an isomeric crystalline base, C8H15NO2, C8H15NO2, C8H15NO2 (II) and a
 liquid
 C8H15N (III) (dehydroxy derivative of II). Structures for II and III
 based on
 the interaction of the ring double bond with the electrophilic N are
 postulated.
 ACCESSION NUMBERS. 1959:45138 HCAPLUS
 DOCUMENT NUMBER. 59:45138
 ORIGINAL REFERENCE NO.: 59:45138
 TITLE: See novel oxime reactions: a reinterpretation
 AUTHOR(S): Minamide, T.
 CORPORATE SOURCE: Cornell Univ., Ithaca, NY
 SOURCE: Proceedings of the Chemical Society, London (1956)
 286-7
 DOCUMENT TYPE: JOURNAL
 LANGUAGE: Unavailable
 IT 105650-46-6
 (Derived from data in the 6th Collective Formula Index (1957-1961))
 NH 105650-46-6 HCAPLUS
 CH Pyrrolidinyl, 4-[2-(dimethylamino)propyl]-1,2-bis(ethoxycarbonyl)-1-
 methyl-, iodide (1:1) (CA INDEX NAME)



● I -

14 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2009 ACS on STM
 L4 Entered STM: 22 Apr 2001
 AB For diagnosis; see printed CA issue.
 AS The reaction of cyclopent-2-enylketone oxime (I) with H2 and AcOH yields
 an isomeric crystalline base, C8H15NO2, C8H15NO2, C8H15NO2 (II) and a
 liquid
 C8H15N (III) (dehydroxy derivative of II). Structures for II and III
 based on
 the interaction of the ring double bond with the electrophilic N are
 postulated.
 ACCESSION NUMBERS. 1959:45138 HCAPLUS
 DOCUMENT NUMBER. 59:45138
 ORIGINAL REFERENCE NO.: 59:45138
 TITLE: See novel oxime reactions: a reinterpretation
 AUTHOR(S): Minamide, T.
 CORPORATE SOURCE: Cornell Univ., Ithaca, NY
 SOURCE: Proceedings of the Chemical Society, London (1956)
 286-7
 DOCUMENT TYPE: JOURNAL
 LANGUAGE: Unavailable
 IT 105650-46-6
 (Derived from data in the 6th Collective Formula Index (1957-1961))
 NH 105650-46-6 HCAPLUS
 CH Pyrrolidinyl, 4-[2-(dimethylamino)propyl]-1,2-bis(ethoxycarbonyl)-1-
 methyl-, iodide (1:1) (CA INDEX NAME)



● I -